IN THE CLAIMS

Claims 1-24 are pending. A current listing of the claims is:

1. (Currently Amended) An auxiliary hydraulic drive system, comprising:

a) a hydraulic pump operable to provide hydraulic flow for an implement having an optimum flow level; and,

b) a flow control valve ~~in~~ located in the path of ~~communication with~~ said hydraulic flow between said pump and the implement, wherein said flow control valve operates to divert excess flow above the substantially constant optimum flow level, wherein said excess flow is diverted from said valve to an excess flow output leading to a reservoir~~away from the implement~~.

2. (Original) The system of claim 1 where said flow control valve reduces the amount of diverted flow as the hydraulic flow from said hydraulic pump is reduced.

3. (Currently Amended) An auxiliary hydraulic drive system having a total hydraulic flow, comprising:

a) a primary hydraulic pump operable to provide hydraulic flow for an implement;

b) a flow control valve in communication with said hydraulic flow, wherein said flow control valve operates to allow ~~an~~ substantially constant optimum flow rate within an optimal flow range and diverts the excess flow amount when the total hydraulic flow exceeds said optimum flow rate;

c) a secondary hydraulic pump selectively ~~operable~~ switchable from a standby state with at most minimal pump flow to an engaged state with substantial pump flow to provide additional hydraulic flow to the system;

d) a control system operable to engage said secondary pump when the total hydraulic flow drops below a minimum flow level; and

e) wherein said control system operates to disengage said secondary pump when the total hydraulic flow exceeds a maximum flow level.

4. (Original) The system of claim 3 wherein said control system comprises a fluid flow valve.

5. (Original) The system of claim 4 wherein said control system further comprises a sensor to detect the total hydraulic flow.

6. (Original) The system of claim 5 wherein said sensor is an engine speed sensor.

7. (Original) The system of claim 5 wherein said sensor is a direct fluid flow sensor.

8. (Original) The system of claim 5 wherein said control system is selectively adjustable to a plurality of flow rates.

9. (Currently Amended) The system of claim 3 further comprising at least a third hydraulic pump operable by said control system and switchable from a standby state with at most minimal pump flow to an engaged state with substantial pump flow to provide additional hydraulic flow.

10. (Currently Amended) A fluid flow system, comprising:

a) a sensor to measure total fluid flow in a system;

b) a valve operable to divert fluid flow beyond ~~an~~ substantially constant optimum level, wherein said valve diverts the excess flow to an excess flow output leading to a reservoir; and,

c) a controller coupled to said sensor and operating said valve to reduce the amount of diverted flow in response to a drop in total fluid flow.

11. (Original) The system of claim 10 further comprising at least one pump, operable by said controller, to provide fluid flow to the system.

12. (Currently Amended) A control unit for a hydraulic system, comprising:

a) a sensor to measure total hydraulic fluid flow in a system;

b) a controller coupled to said sensor and operable to initiate additional fluid flow in the system if the total fluid flow drops below a minimum~~.~~, wherein initiating additional fluid flow includes switching at least one secondary pump from a standby state with at most minimal pump flow to an engaged state with substantial pump flow; and,

c) wherein said controller is operable to reduce the fluid flow in the system if the total fluid flow exceeds a maximum.

13. (Original) The control unit of claim 12 wherein said sensor is an engine speed sensor.

14. (Original) The control unit of claim 12 wherein said sensor is a fluid flow sensor.

15. (Currently Amended) The control unit of claim 12 wherein said controller is operable to initiate additional fluid flow by serially engaging two or more secondary ~~at least one~~ hydraulic pumps from a standby state with at most minimal pump flow to an engaged state with substantial pump flow.

16. (Original) The control unit of claim 12 wherein said controller is operable to reduce the fluid flow by disengaging at least one hydraulic pump.

17. (Original) The control unit of claim 12 wherein said controller is operable to initiate additional flow or reduce fluid flow by adjusting the output of one or more variable output pumps.

18. (Original) The control unit of claim 12 wherein said control unit is operable to selectively combine the flows from more than one pump.

19. (Original) The control unit of claim 18 wherein said control unit is operable to divert excess flow when the combined flows exceed an optimal flow rate.

20. (Currently Amended) A method of providing hydraulic power to an implement having an optimum fluid flow level, comprising the steps of;

a) providing ~~an~~ substantially constant hydraulic fluid flow to an implement having an optimum flow level;

b) monitoring the total hydraulic fluid flow;

c) diverting excess hydraulic fluid flow above the optimum level from said valve to an excess flow output leading to a reservoir~~away from the implement~~; and,

d) increasing the hydraulic fluid flow if the total hydraulic fluid flow drops below a minimum.

21. (Original) The method of claim 20 further comprising the step of reducing the hydraulic fluid flow if the total hydraulic fluid flow exceeds a maximum.

22. (Currently Amended) The method of claim 21 wherein the step of increasing the hydraulic fluid flow includes engaging at least one pump from a standby state with at most minimal pump flow to an engaged state with substantial pump flow.

23. (Original) The method of claim 21 wherein the step of reducing the hydraulic fluid flow includes disengaging at least one pump.

24. (Original) The method of claim 20 wherein the step of monitoring the total hydraulic fluid flow includes an engine speed sensor.